

WHAT IS CLAIMED IS:

1 1. A laser arbor for a saw having a spindle that rotates a saw
2 blade relative to a non-rotating portion of the saw, the laser arbor comprising:
3 a housing;
4 a laser light disposed at least in part within the housing;
5 a circuit electrically connected to the laser for providing power to the
6 laser, the circuit providing power from a voltage source that includes a portion
7 secured to the non-rotating portion of the saw.

1 2. The laser arbor for a saw having a spindle of claim 1 wherein
2 the circuit further comprises a generator having a rotor associated with the spindle
3 and a stator associated with the non-rotating portion of the saw, whereby electrical
4 energy is generated as the spindle rotates the rotor relative to the stator.

1 3. The laser arbor for a saw having a spindle of claim 1 wherein
2 the circuit further comprises a generator having a permanent magnet secured to a
3 fixed guard and an arcuate coil section rotated by the spindle.

1 4. The laser arbor for a saw having a spindle of claim 1 wherein
2 the circuit further comprises an inductively coupled power source comprising a first
3 induction coil that is rotated by the spindle and a second induction coil that is on the
4 non-rotating portion of the saw, and wherein power for the laser light is provided
5 by the inductively coupled power source.

1 5. The laser arbor for a saw having a spindle of claim 1 wherein
2 the circuit further comprises a power source electrically connected by slip ring
3 contacts that establish electrical contact between the power source and the circuit,
4 wherein the slip ring contacts comprise a first set of contacts that rotate with the saw
5 blade and a second set of contacts that are stationary which contact the first set of
6 contacts.

1 6. The laser arbor for a saw having a spindle of claim 1 wherein
2 the circuit further comprises a power conditioning circuit that provides power within
3 a predetermined voltage range to the laser.

1 7. The laser arbor for a saw having a spindle of claim 1 wherein
2 a fixed guard is part of the non-rotating portion of the saw.

1 8. A saw comprising:
2 a motor having a spindle;
3 a blade secured to the spindle and rotated by the motor to cut a
4 workpiece;
5 a laser arbor having a housing secured to the spindle for rotation with
6 the blade;
7 a light source disposed in the housing, the light source emitting a
8 narrow beam of light adjacent the blade for providing a visual indication of the
9 alignment of the blade with the workpiece; and
10 a generator electrically connected to the light source for providing
11 power to the light source, wherein the generator includes a rotor associated with and
12 rotated with the housing and a stator secured adjacent to the housing, the rotor being
13 rotated by the motor relative to the stator for generating a electrical power for the
14 light source.

1 9. The saw of claim 8 wherein the rotor is an electrical coil.

1 10. The saw of claim 9 wherein the stator is an electrical magnet.

1 11. The saw of claim 9 wherein the stator is a permanent magnet.

1 12. The saw of claim 9 wherein the rotor is electrically connected
2 to a power conditioning circuit that provides power directly to the light source.

1 13. The saw of claim 8 wherein the light source is a LED laser.

14. A saw comprising:
a motor having a spindle;
a blade secured to the spindle and rotated by the motor to cut a
workpiece;
a laser arbor having a housing secured to the spindle for rotation with
the blade;
a light source disposed in the housing, the light source emitting a
narrow beam of light adjacent the blade for providing a visual indication of the
alignment of the blade with the workpiece; and
an inductively coupled power source electrically connected to the
light source, wherein the power source includes a first induction coil associated with
and rotated with the housing and a second induction coil secured adjacent to the
housing, the second induction coil inducing voltage in the first induction coil to
provide power to the light source.

15. The saw of claim 14 wherein the rotor is electrically
connected to a power conditioning circuit that provides power directly to the light
source.

16. The saw of claim 14 wherein the light source is a LED laser.

17. A saw comprising:
a motor having a spindle;
a blade secured to the spindle and rotated by the motor to cut a
workpiece;
a laser arbor having a housing secured to the spindle for rotation with
the blade;
a light source disposed in the housing, the light source emitting a
narrow beam of light adjacent the blade for providing a visual indication of the
alignment of the blade with the workpiece; and
a generator electrically connected to the light source for providing
power to the light source, the generator having a permanent magnet secured to a
fixed guard and a coil rotated by the spindle.

- 1 18. A saw comprising:
2 a motor having a spindle;
3 a blade secured to the spindle and rotated by the motor to cut a
4 workpiece;
5 a laser arbor having a housing secured to the spindle for rotation with
6 the blade;
7 a light source disposed in the housing, the light source emitting a
8 narrow beam of light adjacent the blade for providing a visual indication of the
9 alignment of the blade with the workpiece; and
10 a power source electrically connected by a plurality of slip ring
11 contacts that establish electrical contact with the light source, wherein the slip ring
12 contacts comprise a set of rotating contacts that rotate with the blade and a set of
13 fixed contacts that are stationary and are mounted on the saw to contact the first set
14 of contacts.